

宁夏长角蚜蝇属二新种记述 (双翅目, 食蚜蝇科)

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摘要 记述宁夏长角蚜蝇属 8 种, 包括 2 新种和 3 种宁夏新纪录种。瘤颜长角蚜蝇 *Chrysotoxum faciotuberculatum* sp. nov. 近似 *Chrysotoxum chinense* Shannon, 六盘山长角蚜蝇 *Chrysotoxum liupanshanense* sp. nov. 近似突额长角蚜蝇 *Chrysotoxum projiciensfronoides* Huo et Zheng. 模式标本保存于陕西理工学院动植物标本馆。丽纹长角蚜蝇 *Chrysotoxum elegans* Loew, 西伯利亚长角蚜蝇 *Chrysotoxum sibiricum* Loew 和紫柏长角蚜蝇 *Chrysotoxum zibaiensis* Huo, Zhang et Zheng 为宁夏回族自治区首次记录。

关键词 食蚜蝇科, 长角蚜蝇属, 新种, 中国.

中图分类号 Q969.452.7

长角蚜蝇属 *Chrysotoxum* 是食蚜蝇科 Syphidae 中一个比较大的属, 已记录 100 余种, 主要分布在古北区, 其次为东洋区和新北区, 在非洲区, 新热带区也有少量分布。有关中国的长角蚜蝇属研究, Shannon (1926), Shiraki (1930), 李清西等 (1992, 1994), 孙全有等 (1996), 成新跃等 (1998), 霍科科等 (2004, 2006, 2007), 曾先后有报道, 经作者统计, 国内已知长角蚜蝇属 40 余种, 宁夏回族自治区原记录该属 3 种 (孙全有等, 1996)。作者通过宁夏六盘山昆虫资源考察采集标本和陕西省留坝县采集的长角蚜蝇属标本进行整理, 结合已有资料, 记述宁夏长角蚜蝇属 8 种, 包括 2 新种, 3 种为宁夏回族自治区首次记录。模式标本保存于陕西理工学院动植物标本馆。

研究标本除做特别说明外, 均采自宁夏回族自治区泾源县, 标本采集者为霍科科。

1 宁夏回族自治区长角蚜蝇属种类名录

1) 黄颊长角蚜蝇 *Chrysotoxum cautum* (Harris 1776)

检查标本: 1 ♂, 泾源小南川, 2008-07-12; 1 ♂, 泾源, 1995-06-11, 任国栋; 1 ♂, 泾源六盘山, 1996-06-11, 任国栋。

该种文献记载分布于宁夏贺兰山、彭阳、海原 (孙全有等, 1996)。

2) 丽纹长角蚜蝇 *Chrysotoxum elegans* Loew, 1841

检查标本: 1 ♂, 泾源西峡林场, 2008-07-07; 3 ♂, 同上; 1 ♂, 泾源红峡林场, 2008-07-09; 1 ♂, 同上, 2008-07-10; 1 ♀, 泾源小南川, 2008-07-11; 2 ♀, 同上, 2008-07-18; 2 ♀, 泾源龙潭林场, 2008-07-13; 1 ♀, 同上, 2008-07-14; 1 ♂, 1 ♀, 泾源二龙河林场, 2008-07-19。

该种为宁夏回族自治区首次记录。

3) 黄股长角蚜蝇 *Chrysotoxum festum* (Linnaeus 1758)

该种文献记载分布于宁夏固原 (孙全有等, 1996)。

4) 瘤颜长角蚜蝇, 新种 *Chrysotoxum faciotuberculatum* sp. nov.

检查标本: 见新种描述。

5) 八斑长角蚜蝇 *Chrysotoxum octomaculatum* Curtis 1837

检查标本: 1 ♀, 泾源苏台林场, 2008-07-06; 王新谱; 1 ♀, 泾源五谷梁, 2008-07-17; 1 ♀, 泾源小南川, 2008-07-18; 1 ♂, 泾源二龙河林场, 2008-07-19。

该种文献记载分布于宁夏海原、彭阳、西吉、银川、贺兰山、大罗山等地 (孙全有等, 1996)。

6) 六盘山长角蚜蝇, 新种 *Chrysotoxum liupanshanense* sp. nov.

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检查标本: 见新种描述。

7) 西伯利亚长角蚜蝇 *Chrysotoxum sibiricum* Loew, 1856

检查标本: 1 ♂, 宁夏贺兰山, 1996-08-03 任国栋。

该种为宁夏回族自治区首次记录。

8) 紫柏长角蚜蝇 *Chrysotoxum zibaiensis* Huo, Zhang et Zheng 2006

检查标本: 7 ♂♂, 泾源二龙河林场, 2008-07-19; 1 ♂, 泾源龙潭林场, 2008-07-13; 12 ♂♂, 1♀, 同上, 2008-07-14; 1♀, 泾源苏台林场, 2008-07-06; 1 ♂, 泾源小南川, 2008-07-11; 1 ♂, 1♀, 同上, 2008-07-12。

该种为宁夏回族自治区首次记录。

2 新种记述

瘤颜长角蚜蝇, 新种 *Chrysotoxum faciotuberculatum* sp. nov. (图 1~16)

雄性 头部宽于胸。复眼具黄白色短毛, 下半部眼毛稀疏。头顶黑色, 具黑色长毛。单眼三角狭长, 等腰三角形。额黑色, 被黑色长毛, 沿复眼具近白色绵毛, 额突明显, 背面中央具纵沟。颜侧面观近中部明显凹入, 颜中突位于复眼下缘位置, 明显突出; 颜黄色, 覆黄色毛, 具黑色中条纹, 条纹两侧黄褐色, 从触角基部伸达口缘, 侧面复眼之下具黑色侧条纹。颊部黄褐色至黑褐色, 被浅色长毛。后头黑色, 密被近黄白色粉和毛, 背面复眼之后具向前弯曲的黑毛。触角黑色, 基部 2 节被黑毛, 三节长度之比为 1.0: 1.5: 2.5。触角芒裸, 明显长于第 3 触角节, 黄褐色。

胸部黑色, 略带蓝色光泽。肩胛黄色, 覆白色薄粉, 中胸背板后部具灰白色薄粉, 两侧具黄色侧条纹, 在横沟之后宽的中断, 中央具 1 对灰白色粉被条纹, 从背板前缘伸达盾后区中部; 背板被黑毛, 后部夹杂黑色长毛。小盾片暗褐色, 透明, 有时基部和后缘具黄褐色边, 被黑色近平伏的短毛, 夹杂许多黑色长毛。盾下缘短, 褐色, 仅位于小盾片后腹缘的两侧。侧板具 1 黄色纵斑, 该纵斑位于上前侧片后部及下前侧片上部。侧板被毛黑色, 下后侧片上、下毛斑后端狭地相连, 基侧片裸。后胸腹板裸。

足橘黄色, 各足基节、转节黑色, 腿节红褐色, 有时基半部黑褐色至黑色。足被毛橘黄色, 基节、转节被黑毛, 后足基节后中端角缺毛簇, 各足腿节后侧主要被黑毛。

翅透明, 前缘略暗。翅膜具微刺, 无裸区。图 5

明显凹入 DM 室。腋瓣浅黄褐色。平衡棒褐色。

腹部黑色, 宽卵形, 背面较平, 拱起不明显, 侧缘隆脊红褐色, 发达, 背板后侧角不突出。第 2~5 背板各具 1 对黄色弓形狭横带, 其外端伸达背板后半部, 与侧缘的红褐色相连, 内端靠近背板前缘, 第 2 背板黄斑内端分离较宽, 第 3~4 背板黄斑内端分离狭或几乎相连, 第 2~4 背板后缘红褐色, 其中第 2 背板后缘带最狭, 第 3~4 背板后缘带宽, 中央向前突出, 第 5 背板在横带之后大部分红褐色。腹部背板被黑色近平伏的短毛, 横带及其之前被毛浅黄色, 背板侧缘具黑色短刺。第 1 背板被毛浅黄色, 第 2 背板前部两侧被浅黄色长毛, 部分个体混生黑色长毛。腹部腹板黑色, 主要被浅色近平伏的短毛, 第 3、4 腹板前缘具黄色横带或斑, 后腹部黄褐色至红褐色。雄性尾器伸达第 4 腹板后缘。

雄性尾器第 9 背板黑褐色。尾须黄褐色, 被同色长毛。背针突狭长, 基半部扩宽, 侧面观顶端钝圆, 背部被稀疏的黄褐色长毛, 内侧表面具黑色短刺。上叶黑色, 近椭圆形。阳茎端部扩大。第 9 腹板舌状突略低于侧臂。

雌性 复眼被毛较雄性短而稀疏。头顶在复眼后缘之间的宽度约为头宽的 1/5, 头顶和额被黑色平伏短毛。额中部两侧沿复眼具三角形黄粉斑。颊部棕色到黄褐色。触角 3 节长度之比为 1: 1: 2, 触角芒明显长于第 3 触角节。胸部被毛较雄性短, 中胸背板后部及小盾片被毛长度几乎一致, 部分个体小盾片后缘具少许黑色长毛。腿节红褐色, 后足腿节无黑毛。余同雄性。

体长: ♂ 13~16 mm, ♀ 13~15 mm; 翅长: ♂ 12~14 mm, ♀ 11~14 mm。

正模 ♂, 陕西, 留坝紫柏山, 北纬 33°41', 东经 106°42', 海拔 1 665~2 490 m, 2009-07-18。副模: 4 ♂♂, 同正模; 1♀, 陕西, 留坝营盘, 海拔 1 665~2 490 m, 2007-07-27; 1♀, 同上, 2007-07-26; 1 ♂, 陕西, 同上, 2007-07-25; 1 ♂, 陕西, 同上, 2007-07-24; 1♀, 陕西, 留坝光华山, 海拔 1 665~1 890 m, 2006-07-15; 1♀, 泾源小南川, 1 990~2 143 m, 2008-07-18; 1♀, 同上, 2008-07-12; 2 ♂♂, 同上, 2008-07-11; 1 ♂, 2♀♀, 泾源西峡林场, 海拔 1 971~2 078 m, 2008-07-08; 1 ♂, 同上, 2008-07-15; 2 ♂♂, 4♀♀, 泾源五谷梁, 海拔 2 622 m, 2008-07-17; 2 ♂♂, 1♀, 同上, 2008-07-16; 6 ♂♂, 1♀, 泾源龙潭林场, 海拔 1 937~2 132 m, 2008-07-14; 1 ♂, 2♀♀, 同上, 2008-07-13; 2♀♀, 泾源凉殿峡, 海拔 2 152~2 384 m, 2008-07-20; 1 ♂, 1♀, 泾源红峡林场,

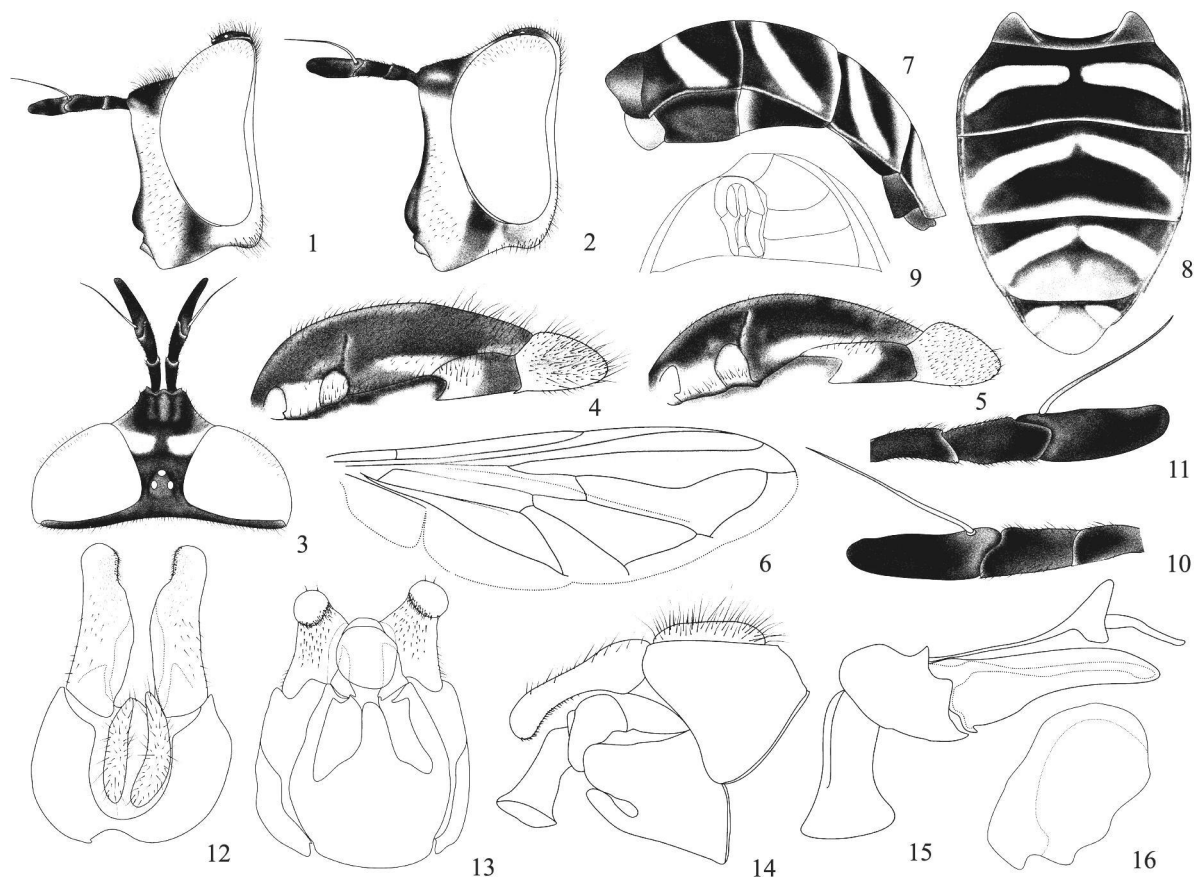


图 1~16 瘤颜长角蚜蝇, 新种 *Chrysotoxum faciotuberculatum* sp. nov.

1. 雄性头部侧面 (head lateral view, ♂) 2. 雌性头部侧面 (head lateral view, ♀) 3. 雌性头部背面 (head dorsal view, ♀) 4. 雄性中胸盾片侧面 (mesonotum lateral view, ♂) 5. 雌性中胸盾片侧面 (mesonotum lateral view, ♀) 6. 翅 (wing, ♂) 7. 雌性腹部侧面 (abdomen lateral view, ♀) 8. 雄性腹部背面 (abdomen dorsal view, ♂) 9. 雄性后腹部腹面 (postabdomen ventral view, ♂) 10. 雌性触角 (antenna inner view, ♀) 11. 雄性触角 (antenna outer view, ♂) 12. 雄性第 9 背板及附器 (male epandrium and appendages, posterior view, ♂) 13. 雄性尾器腹面 (male genitalia ventral view, ♂) 14. 雄性尾器侧面 (male genitalia lateral view, ♂) 15. 阳茎 (aedeagus, ♂) 16. 上叶侧面 (superior lobe, lateral view, ♂)

2008-07-09 1 ♂, 同上, 2008-07-10 2 ♂ & 7 ♀, 泾源二龙河林场, 海拔 2130 m, 2008-07-19

新种近似 *Chrysotoxum chinense* Shannon, 但新种两性复眼被白色短毛, 触角芒略长于触角基部二节之和, 雄性颊部黄褐色到黑褐色, 腿节红褐色, 有时基半部黑褐色至黑色, 雌性颊部棕色到黄褐色, 腿节红褐色。后者两性复眼裸, 触角芒短于触角基部二节之和, 腿节基部黑色。

词源: 取拉丁词 *facio*- (颜) 与 *tuberculatum* (瘤) 组成新种名, 即意指颜具明显颜中突。

六盘山长角蚜蝇, 新种 *Chrysotoxum liupan shanense* sp. nov. (图 17~21)

雄性 头部宽于胸。复眼上部被黑褐色毛, 下部被毛浅褐色。复眼接缝短于额长。头顶黑色, 单眼三角隆起, 被黑毛。额突明显上翘, 黑色, 被黑

毛, 基部沿复眼覆黄粉。颜中部略凹入, 中突不明显; 颜柠檬黄色, 被黄毛, 中央具棕褐色纵条, 两侧复眼下方具棕褐条纹。颊红黄色, 被浅色长毛。后头部黑色, 下端红褐色, 被棕黄色至金黄色毛, 背部沿复眼后缘具 1 列黑色长毛。触角黑色, 基部 2 节被黑毛, 3 节长度之比为 1.5:1.0:2.2, 触角芒明显长于触角第 3 节。

肩胛黑褐色。中胸背板黑色, 前部中央具 1 对灰白色粉被条纹, 伸达横沟之后, 两侧在横沟之前具黄白色粉斑, 翅后胛黄色; 背板被棕黄色毛, 侧缘在横沟与翅后胛之间被黑毛。小盾片黑褐色, 两侧基部黑色, 基部覆黄粉, 被毛黑色, 基部毛棕黄色, 盾下缘黑色, 稀疏。侧板黑色, 被棕黄色毛, 上后侧片被黑毛, 中胸上前侧片后端及下前侧片后端具黄白色粉斑, 粉斑之上长毛白色。基侧片及后胸腹板裸。

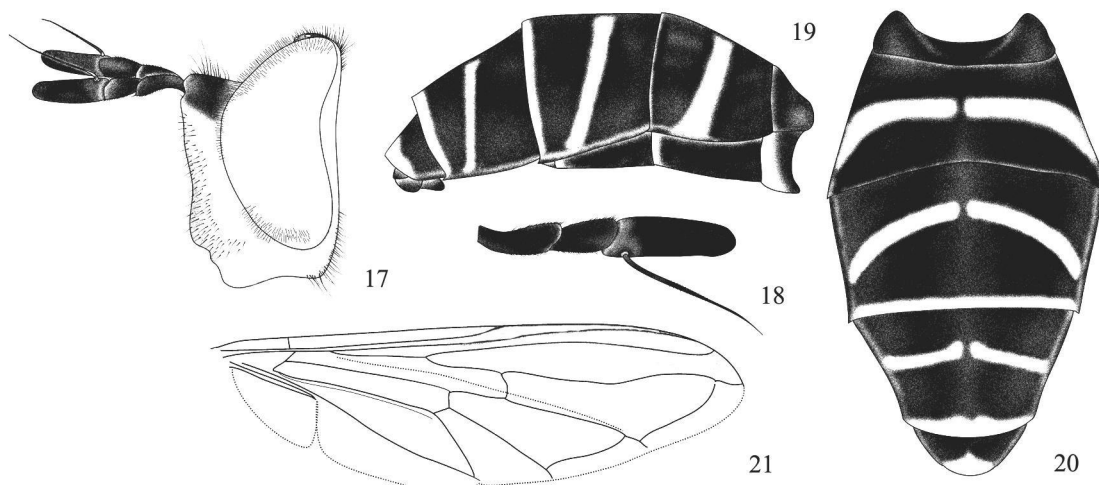


图 17~21 六盘山长角蚜蝇, 新种 *Chrysotoxum lipanshanense* sp. nov.

17. 雄性头部侧面 (head, lateral view, ♂) 18. 触角 (antenna, outer view) 19. 雄性腹部侧面 (abdomen, lateral view, ♂) 20. 雄性腹部背面 (abdomen, dorsal view, ♂) 21. 翅 (wing)

足黄色, 被黄毛, 各足基节、转节黑色, 被黑毛, 腿节红褐色, 前、中足腿节腹侧基部黑褐色, 后足腿节前腹侧大部分黑褐色。前足腿节后腹侧长毛黑色, 中足腿节后腹侧及后足腿节前腹侧混生黑毛。

翅透明, 略带黄褐色, 前缘黄色, 端部和中部形成明显的褐色云斑, 翅脉黄褐色。翅膜具微刺, 以下区域裸: R室 (伪脉附近除外)、BM室、Cup室前缘, 臀叶基部具条形裸区。腋瓣近黄白色, 平衡棒黄褐色。

腹部长卵形, 黑色, 背板侧缘全黑色, 具边, 第2~4背板后侧角突出。第1背板被黑毛。第2背板中央具1对黄色狭横带, 几与背板前缘平行, 内端狭, 外端较宽, 两端向后伸达背板后部, 但不达背板侧缘; 背板被毛黄色, 后缘具黑色平伏短毛。第3背板后缘具狭黄带, 中部黄色横带狭于第2背板横带, 两侧不达背板侧缘; 背板被黄毛, 横带之后被黑色半直立的短毛, 但后缘黄带被毛黄色。第4背板近似第3背板, 但中部黄带更狭, 后缘黄带中央向前角状略突出。第5背板黑色, 后缘具三角状红黄斑, 露尾节黑色, 被黑毛。腹部腹面黑色, 第1腹板后缘黄白色, 第2~4腹板后缘黄白色; 腹板被黑毛。

雌性未知。

♂ 体长 15mm, 翅长 13mm。

正模 ♂, 泾源西峡林场, 北纬 35°29', 东经 106°18', 海拔 1971~2078m, 2008-07-08 副模 1 ♀, 同正模。

新种近似突额长角蚜蝇 *Chrysotoxum*

projicientifrons Huo et Zheng 但新种第2背板黄色横带宽, 第4背板黄横带最狭, 后缘黄带中央突出不明显, 第5背板基部黑带宽, 约占背板长的1/2, 后者第2~4背板中部横带近等宽, 第4背板后缘横带宽, 第5背板仅基部两侧角黑色。

词源: 新种以模式产地命名。

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DESCRIPTIONS OF TWO NEW SPECIES OF GENUS *CHRYSOTOXUM* (DIPTERA, SYRPHIDAE) FROM NINGXIA, CHINA

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Abstract Eight species of genus *Chrysotoxum* (Diptera, Syrphidae) are recorded from Ningxia Hui Autonomous Region, China of which two species are new to science and three species are recorded for the first time from Ningxia. The type specimens are preserved in the Museum of Animal and Botany, Shaanxi University of Technology Hanzhong, China.

Chrysotoxum cautum (Harris 1776)

Specimens examined 1 ♂, Xiaonanchuan, Jingyuan County, 12 July 2008; 1 ♂, Jingyuan County, 11 July 1995; REN Guo-Dong 1 ♂, Mt Liupan, Jingyuan County, 11 July 1996; REN Guo-Dong

This species was also recorded from Mt Helanshan, Pengyang County, and Haiyuan County. (Sun 1996)

Chrysotoxum elegans Loew, 1841

Specimens examined 1 ♂, Xixia Forestry Centre, Jingyuan County, 7 July 2008; 3 ♂♂, same data as above; 8 July 2008; 1 ♂, Hongxia Forestry Centre, Jingyuan County, 9 July 2008; 1 ♂, same data as above; 10 July 2008; 1 ♀, Xiaonanchuan, Jingyuan County, 11 July 2008; 2 ♀♀, same data as above; 18 July 2008; 2 ♀♀, Longtan Forestry Centre, Jingyuan County, 13 July 2008; 1 ♀, same data as above; 14 July 2008; 1 ♂, 1 ♀, Erlonghe Forestry Centre, Jingyuan County, 19 July 2008

This species is recorded for the first time from Ningxia

Chrysotoxum festivum (Linnaeus 1758)

The species was listed from Guyuan County. (Sun 1996)

Chrysotoxum faciutuberculatum sp. nov. (Figs 1-16)

The new species is similar to *Chrysotoxum chinense* Shannon, but can be distinguished from the latter by the eyes short white pubescent in both male and female; arista slightly longer than basal two antennal segments together; in male gena yellowish to blackish brown; femur reddish brown on basal part but black in some individuals; in female gena brown to yellowish brown and femur reddish brown. *Chrysotoxum chinense*

has eye bared; arista shorter than basal two segments and femora black on basal part

Etymology The Latin word '*faciutuberculatum*' means 'face with tubercle', in reference to face with a distinct tubercle

Body length 1 ♂ 13-16 mm, 1 ♀ 13-15 mm; wing length 1 ♂ 12-14 mm, 1 ♀ 11-14 mm.

Holotype ♂, Shaanxi Province, Mt Zibai (33°41'N, 106°42'E, alt 1 665-2 490 m), Liuba County, 18 July 2009. Paratypes 4 ♂♂, same data as holotype; 1 ♀, Shaanxi Province, Yingpan (alt 1 665-2 490 m), 27 July 2007; 1 ♀, same data as above; 26 July 2007; 1 ♂, same data as above; 25 July 2007; 1 ♂, same data as above; 24 July 2007; 1 ♀, Shaanxi Province, Mt Guanghua (alt 1 665-1 890 m), 16 July 2006; 1 ♀, Xiaonanchuan (alt 1 990-2 143 m), Jingyuan County, 18 July 2008; 1 ♀, same data as above; 18 July 2008; 2 ♂♂, same data as above; 11 July 2008; 1 ♂, 2 ♀♀, Xixia Forestry Centre (alt 1 971-2 078 m), Jingyuan County, 8 July 2008; 1 ♂, same data as above; 15 July 2008; 2 ♂♂, 4 ♀♀, Wuguliang (alt 2 622 m), 17 July 2008; 2 ♂♂, 1 ♀, same data as above; 16 July 2008; 6 ♂♂, 1 ♀, Longtan Forestry Central (alt 1 937-2 132 m), Jingyuan County, 14 July 2008; 1 ♂, 2 ♀♀, same data as above; 13 July 2008; 2 ♀♀, Liangdianxia (alt 2 152-2 384 m), 20 July 2008; 1 ♂, 1 ♀, Hongxia Forestry Central (alt 2 054-2 185 m), 9 July 2008; 1 ♂, same data as above; 108 July 2008; 2 ♂♂, 7 ♀♀, Erlonghe Forestry Central (alt 2 130 m), Jingyuan County, 19 July 2008

Chrysotoxum octomaculatum Curtis 1837

Specimens examined 1 ♀, Suta Forestry Centre, Jingyuan County, 6 July 2008; WANG Xin-Pu 1 ♀, Wuguliang, Jingyuan County, 17 July 2008; 1 ♀, Xiaonanchuan, Jingyuan County, 18 July 2008; 1 ♂, Erlonghe Forestry Centre, Jingyuan County, 19 July 2008.

The species is also distributed in Haiyuan County, Pengyang County, Xiji County, Yinchuan, Mt Helan and Mt Daluo. (Sun 1996)

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Chrysotoxum liupanshanense sp. nov. (Figs 17-21)

The new species is allied to *Chrysotoxum projecifrontoides* Huo et Zheng but differs from the latter in having the widest yellow band on the second abdominal tergum and the narrowest band on the fourth tergum, yellow hind margin of fourth tergum less protruded at the middle, black band on the fifth abdominal tergum broad, nearly as half as length of fifth tergum. *Chrysotoxum projecifrontoides* has the yellow bands on abdominal terga 2 to 4 with nearly equal width, the fourth tergum with the widest yellow hind margin and the fifth tergum black only on basal lateral comers.

Etymology. The new species is named after the type locality.

Female unknown.

Body length: ♂ 15 mm; wing length ♂ 13 mm.

Holotype ♂, Xia Forestry Centre (35° 29' N,

106° 18' E, alt. 1 971-2 078 m), 8 July 2008. Paratype 1 ♂, same data as holotype.

Chrysotoxum sibiricum Loew, 1856

Specimens examined 1 ♂, Mt. Helanshan, 3 July 1996, REN Guo-Dong.

This species is recorded for the first time from Ningxia.

Chrysotoxum zibaensis Huo, Zhang et Zheng 2006

Specimens examined 7 ♂♂, Erlonghe Forestry Centre, Jingyuan County, 19 July 2008; 1 ♂, Longtan Forestry Centre, Jingyuan County, 13 July 2008; 12 ♂♂, 1 ♀, same data as above, 14 July 2008; 1 ♀, Suta Forestry Centre, Jingyuan County, 6 July 2008; 1 ♂, Xiaonanchuan, Jingyuan County, 11 July 2008; 1 ♂, 1 ♀, same data as above, 12 July 2008. This species is recorded for the first time from Ningxia.

Key words Syphidae, *Chrysotoxum*, new species, China